

**From:** Abhay Padgaonkar  
**Date:** August 18, 2021  
**Docket:** Resource Planning and Procurement (E-00000V-19-0034); Energy Rules (RU-00000A-18-0284)  
**Re:** **Top-10 Fatal Flaws: The Ascend Report is "Garbage In, Garbage Out"**

Dear Chairwoman Márquez Peterson and Commissioners:

As foreseen in my recent filing about APS and Staff being two bad actors,<sup>1</sup> Ascend Analytics has predictably produced a worthless report, which must be disregarded by the Commission. Any misguided attempt to weaponize this report's findings, as seems to have occurred, to undermine clean energy standards will lack all credibility.<sup>2</sup>

You may recall that despite the six fatal flaws and vociferous objections,<sup>3</sup> the bogus Energytools report falsely claimed that APS had made the ratepayers whole. The Commission ignored the admonitions and accepted the Energytools report and APS's statements at face value — only for the AG's office to make APS pay **\$25 million** in restitution to the ratepayers while the Commission sat on its hands. Almost like a sequel to the Energytools report debacle, the Ascend Report is another complete waste of valuable time and resources in a blatant attempt engineered by Utilities Director Elijah Abinah to stall the process and protect the utilities. As a ratepayer, I find this whole charade infuriating.

Here are the **Top-10 fatal flaws** (including at least three clear violations of Decision No. 76632), which make the Ascend Report "garbage in, garbage out":

1. **Bogus Growth Assumption:** APS disclosed in its SEC filings that it served a peak demand of about 7,000 MW in 2005 and despite the extremely hot summer in 2020, the total growth in peak demand since 2005 was only **9%** and the annual growth rate was a trifle **0.60%** over the previous 15 years.<sup>4</sup> Over the next 15 years from 2020-2035, however, APS assumed in its IRP a **50%** total growth or **2.8%** annual growth rate in base peak demand, and the Ascend Report rubberstamped this phenomenal growth.<sup>5</sup> If you buy that APS will grow nearly **5 times** faster over the next 15 years — a growth rate that would make even high-tech companies envious — compared to the previous 15 years, you probably believe in the tooth fairy too. Anything which comes after that in the Ascend Report is garbage in, garbage out.
2. **Ascend Report Is Not an Independent Review:** Decision No. 76632 ordered an **independent review**. In clear violation of Decision No. 76632, the Ascend Report is not at all independent. All modeling and analysis was performed by the utilities themselves and not by Ascend Analytics. Capacity expansion algorithms were not used and instead "hand-designed" algorithms by the utilities were used. The Ascend Report only compares three discrete scenarios, *none of which were optimized*. The Ascend Report concedes that a "more thorough" study would have used capacity expansion algorithms. Garbage in, garbage out.
3. **Ascend Report Has Costs, but No Benefits:** Decision No. 76632 had ordered "an independent review of the scenarios and portfolios presented in each IRP, and of their respective costs **and benefits** ..." "

<sup>1</sup> "Commission Is Rewarding Two Bad Actors! 1) APS and 2) Commission Staff" at:

<https://docket.images.azcc.gov/E000014870.pdf>

<sup>2</sup> "Here is What it Will Cost You to Achieve 100% Clean Energy" at:

<https://azcc.gov/news/2021/08/12/here-is-what-it-will-cost-you-to-achieve-100-clean-energy>

<sup>3</sup> "Six Fatal flaws in the Energytools Report confirm inadequate customer compensation by APS" at:

<https://docket.images.azcc.gov/E000009115.pdf>

<sup>4</sup> Pinnacle West Form 10-K SEC Filings at: <http://www.pinnaclewest.com/investors/reports/sec-filings/default.aspx>

<sup>5</sup> Ascend Revised Report, Appendix 5 at: <https://docket.images.azcc.gov/E000015107.pdf#page=80>



The Ascend Report is completely devoid of any discussion or analysis regarding benefits, thereby clearly violating Decision No. 76632. Without accompanying benefits for each scenario, how does one compare their cost effectiveness? Even assuming that there is incremental cost to 80% Clean and 100% Clean portfolios relative to the "Least Cost" portfolio, how does one determine if that extra cost is worth it or not without taking into account the accompanying benefits of cleaner energy? Should the cost alone for the "least-cost" portfolio that produces **four times the CO<sub>2</sub> emissions in 2040** be even compared to the 100%-Clean scenario? That's like claiming that leaded gasoline is least-cost without taking into account the damage it causes. Recent research has arrived at a startlingly high figure for the mortality cost of carbon: **\$258 per metric ton**.<sup>6</sup> By focusing only on costs without taking into account the mortality cost of carbon, and thereby ignoring the attendant benefits of the cleaner scenarios, the Ascend Report is in violation of Decision No. 76632. Garbage in, garbage out.

4. **Staff and Ascend Let APS Cherry-Pick Four Corners:** Another term for "hand-designed" is "cherry-picked." One of the prized cherries that APS was allowed to pick was Four Corners — thanks to Mr. Abinah running interference and Ascend acquiescing. What all that led to was never even considering a scenario with early retirement for APS's most ancient, most expensive, and filthiest Four Corners coal plant — despite SWEEP's finding in January 2021 that compared to a "business as usual" reference case, the Optimal Resource Portfolio would reduce total electricity system generation costs by more than **\$2 billion (net present value) through 2035**.<sup>7</sup> Now, the Ascend Report says that "APS ***should have explicitly shown a scenario*** in which Four Corners retired earlier than 2031." No kidding! The Ascend Report goes on to state that "it is likely true that the must-run constraint on Four Corners **does not result in the least-cost portfolio**." Early retirement of Four Corners remains a critically important *alternative* scenario — exactly the kind that Decision No. 76632 envisioned as "not adequately represented or considered in the IRP." By failing to consider the Four Corners early retirement alternative scenario, the Ascend Report is in clear violation of Decision No. 76632. Garbage in, garbage out.
5. **Ascend Report Is Not Thorough Enough to Support Policy Making:** The Ascend Report took months and has cost untold fees to the ratepayer. Shockingly, the Ascend Report recommends *another* independent study that would last more than twice as long and likely cost more than double "*should the ACC feel more analysis would be beneficial to support regulatory policy making.*" In short, the Ascend Report concedes that it is not thorough enough to support regulatory policy making. Garbage in, garbage out.
6. **"Critical Flaw" in APS Modeling Overlooked:** Despite noting a "critical flaw in the APS modeling software" with respect to modeling capacity expansion correctly, the Ascend Report "commends the LSEs on their IRP work, as they show credible pathways towards a dramatically lower carbon future while also maintaining reliability and managing costs." Huh? But how credible can the pathways be if the software modeling the pathways had a critical flaw? Also, the Ascend Report doesn't clarify whether the Aurora software itself deficient or APS's use of it is flawed. Garbage in, garbage out.
7. **Ascend Report Made Flawed Assumptions:** The Ascend Report concedes that these portfolios **may not be deemed "optimal,"** but reassure us that they are "directionally instructive" — whatever that means. The Ascend Report is littered with questionable assumptions like using the utilities' flawed IRP portfolios as a starting point or assuming that natural gas generation would remain the primary resource for incremental capacity in the least-cost portfolio. Garbage in, garbage out.
8. **Is Ascend Report a Press Release for APS?** Although admitting that the Solana PPA is "**certainly badly out-of-the-money' for renewable energy,**" the Ascend Report's narrative sounds like an APS press

<sup>6</sup> "A Carbon Calculation: How Many Deaths Do Emissions Cause?" at: <https://www.nytimes.com/2021/07/29/climate/carbon-emissions-death.html>

<sup>7</sup> SWEEP's Independent Analysis, January 2021 at: <https://docket.images.azcc.gov/E000011308.pdf>



release using words like "hindsight" — while failing to reference contemporaneous public statements by Don Brandt made in 2008 that were **not in hindsight, but based on facts, circumstances, and knowledge that APS possessed at the time.**<sup>8</sup> The Ascend Report justifies APS's actions as "APS only pays for energy delivered even if that energy costs significantly above market" — as if that makes any difference to the ratepayers paying four times the current market cost for solar. The Ascend Report claims that Solana should be considered "must-take" because APS is "contractually obligated." By definition, every PPA is a contractual obligation, but an imprudent PPA is still imprudent regardless of contractual obligations. The Commission cannot evaluate any contracts signed by the utilities even if they appear to be imprudent? Garbage in, garbage out.

9. **Stakeholder Engagement, Really?** One of the Ascend Report's strangest recommendations is to include a stakeholder engagement process. Sierra Club formally communicated its concerns about critical failures in APS's modeling in comments filed on **October 15, 2020**. Sierra Club had requested to run at least one "alternative" scenario *without* APS's "must-run" assumption for Four Corners or at least with an earlier (2026) retirement. SWEEP filed an independent analysis in **January 2021** stating that "accelerating these emissions reductions to a date prior to 2032 is not only achievable but is also part of the least cost portfolio for Arizona."<sup>9</sup> Sierra Club also voiced these same concerns to Staff during two stakeholder meetings **with Ascend Analytics on April 22 and May 21, 2021**. SWEEP filed an independent analysis of APS's 2020 IRP in May 2021 and specifically asked the Commission to direct APS to "Eliminate coal unit 'must-run' designations."<sup>10</sup> All of these and other stakeholder entreaties since October 2020 were repeatedly rebuffed by Mr. Abinah,<sup>11</sup> and yet the Ascend Report has the gall to recommend "a stakeholder engagement process." Give me a break! Garbage in, garbage out.
10. **Is the Least-Cost Portfolio Really Least-Cost?** Although the Ascend Report asserts that the least-cost portfolio "is not easy to define without the time to perform a full capacity expansion analysis" (something which Ascend did not do), and yet it presents a least-cost portfolio anyway! The Ascend Report assumed that natural gas power plants are "least-cost" for providing firm capacity while admitting at the same time that renewable energy "is now widely considered the least-cost source of bulk system energy." Further, the Ascend Report simply ignored SWEEP's **\$2 billion (net present value) through 2035** in reduced total electricity system generation costs by giving APS a pass on Four Corners. Garbage in, garbage out.

Despite all its fatal flaws, the Ascend report did get one thing right about inputs and assumptions though (see below).<sup>12</sup>

## Getting Inputs and Assumptions Right

The old saying, "garbage in = garbage out" is eternal.

<sup>8</sup> "Solana PPA — a \$2 Billion Boondoggle — Must Be Externally Audited" at: <https://docket.images.azcc.gov/E000014613.pdf>

<sup>9</sup> SWEEP's Independent Analysis, January 2021 at: <https://docket.images.azcc.gov/E000011308.pdf>

<sup>10</sup> SWEEP's Independent Analysis of APS 2020 IRP in May 2021 at: <https://docket.images.azcc.gov/E000013367.pdf>

<sup>11</sup> "Commission Is Rewarding Two Bad Actors! 1) APS and 2) Commission Staff" at: <https://docket.images.azcc.gov/E000014870.pdf>

<sup>12</sup> Ascend Revised Report, p26 at: <https://docket.images.azcc.gov/E000015107.pdf#page=30>